NeWater

TRAINING AND DISSEMINATION WORKSHOPS IN THE NILE BASIN

Report of the NeWater project -
New Approaches to Adaptive Water Management under Uncertainty

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Policy Summary

This report of the NeWater project presents the implementation and results of 3 major workshops for capacity building and training, dissemination and exchange of knowledge and experiences on adaptive water management in the Nile basin.

For the Nile basin it is important that the tools support trans-boundary processes concerning Water Framework Directive issues in Water Initiative implementation areas. The training of the interdisciplinary tool Waterwise increasing the ability for integrated assessment, strengthens the transition to river basins adaptive management by addressing the role of spatial planning component.

The adaptability of tools for the region of the practitioners promotes the transition towards a more adaptive IWRM. The 'search conference' approach improves the ability to analyse current institutional structures and institutional change. 'Dealing with multiple Actors', allows learning in multiparty collaboration, diverging problem definitions, dealing with different interests, conflict management and negotiations.

Communities in the Nile region are extremely vulnerable for global change. Newater workshops increased the readiness to include social approaches in project planning and to include climate change and climate variability in scenarios for national economy and water management. All workshops experienced a high degree of awareness raising, exchange of knowledge and believes and sharing of responsibilities.

The Training has been set-up as a 'training of trainers' and has been implemented from 19 till 21 February 2008 at a Regional Center for Training and Water studies in Cairo on invitation of the Applied Training Programme of the Nile Basin Initiative. The training supports capacity building in the Nile basin on adaptive water management approaches and tools. The training functions as a try-out of enhanced NeWater tools and as test training for stakeholder training in future.

The Workshop capacity Building in Social development and coping with Climate change , Guiding principles in NELSAP project has been organised from16-18 September 2009 in Kigali by the NBI branch Confidence Building and Stakeholders Interaction (CBSI) with facilitation by NeWater staff.

The Land and water Partners workshop was organised by the Water Resources Planning and Management team (WRPM) of NBI on February 28, 2009 in Addis Ababa, Ethiopia.

The NeWater workshops on AWM approaches, tools and applications have contributed to information exchange, awareness raising, and capacity building on project formulation, planning stakeholder processes, on negotiations and decision making concerning spatial planning in the hydrological context.

Table of contents

1 Introduction

1.1 Description Nile basin

The Nile is the world's longest river at 6,700 km and has long been one of the world's greatest natural assets. It is a transboundary river shared by 10 African countries (Burundi, the Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, and Uganda). The Nile River originates from two distinct geographical zones, the basins of the White and Blue Niles and drains an estimated 3.1 million sq. km. Its catchment area covers 10% of Africa's landmass. An estimated 160 million people live in the basin while 300 million (40% of Africa's population) live in the riparian countries. The population is projected to increase to 800 million people by the year 2050. Despite extraordinary resources, there is wide spread poverty within the Nile basin with an average per capita Gross Domestic Product (GDP) of US$250. Today, the Nile Basin faces challenges of poverty (5 of its riparian countries are among the 10 poorest in the world), instability (conflicts in the Great Lakes Region, Sudan, and the Horn of Africa), rapid population growth, and environmental degradation.

Population growth coupled with widespread poverty are key drivers in socio-economic development and this increases pressure on the water resources through increased storage and diversion of surface water, in order to serve the increasing energy and agricultural demands. Effects include ecological consequences like reduction in stream flows, and riparian habitats. In the upstream countries forests are cut down and wetlands drained. Soils are eroded, resulting in reduced crop yields and non-sustainable livelihoods. Groundwater recharge is reduced and levels lowered, river flows become flashier and downstream flood and drought impacts are enhanced. Other stresses include high sediment loads, water quality changes, seawater intrusion and waterweed infestation. In Egypt and Sudan the aspirations of the population and economies are intricately linked with water.

1.2 Major problems and challenges

Population growth and widespread poverty are key problems to be solved in the Nile Basin countries. Only through socio-economic development can the pressures on the water resources aggravated by future climate change and climate variability be reduced. The international dialogue on water sharing as implemented by the Nile Basin Initiative needs to

be widened to include economic cooperation in the region. Discussions about sharing contested water resources frame the problem differently then a discussion focused on sharing the potential benefits of using water resources in a better way.

The Nile Basin Initiative is advocating sharing the benefits and has been able to reduce tensions between the Nile riparian countries. At the technical level there is a growing awareness that transboundary cooperation needs to be widened and guided away from a water sharing discourse. At the political level, however, the NBI recommendations have not yet been acknowledged and accepted.

The Nile Basin countries are mainly rural economies with limited economic activities other than agriculture. Agriculture itself is mainly subsistence in nature in many countries, with limited links to local markets. Production levels are far below potential which offers opportunities for the future. Water, climate change and climate variability are important determinant factors for future (agricultural) development. Market development and diversification of national economies, however, are absolute necessary to benefit from these opportunities.

Large investments and possibly extra operational funds are needed in the Nile Basin to guarantee a better (economic) future. Many of these investments (hydropower, small scale water buffering through watershed improvement, increase agricultural productivity through better farm management) are endangered by the huge uncertainty in the climate change forecasts for the Nile Basin. The uncertainty in the future climate conditions urgently needs to be reduced by better (regional) climate models. Investment decisions need to be screened with consideration for the uncertainty in climate change predictions (climate proofing).

1.3 Stakeholder approaches and workshops

Working with the NBI as a stakeholder means working in an formal environment that must accommodate national preferences and obstacles and plan according to an international agenda. Through this collaboration, the team organized and actively participated in seven major stakeholder workshops:

- The NBI kick-off workshop (October 2005) in Entebbe to define the research agenda for the Newater Nile program and to incorporate climate change and climate variability into the existing Nile Basin Program.
- The Water Scarcity Workshop (March 2007) in Cairo to identify strategies for Egypt to deal with future water scarcity due to population growth and uncertainties in climate change.
- The NBI stakeholder meeting (April 2007) in Entebbe to update and re-confirm the Newater Nile research program.
- The NBI training workshop (February 2008) in Cairo to test the application of the first prototype of Waterwise for the Nile Basin.
- The Climate Change Research Scoping workshop (June 2008) in Nairobi.
- The NBI workshop (September 2008) in Kigali on the integration of social development issues and climate change in NBI investment projects.
- The NBI workshop (February 2009) in Addis Ababa on the application of Waterwise in the Nile Basin.

These encounters with the NBI community served goals on adaptive water management in order to get maximum exchange of information and provide support to policy making and

strengthen the capacity of the NBI. The following of these meetings had their particular focus on training and capacity building.

The Train the Trainers on "Learning about adaptive management in the Nile basin – Learning for interdependence" in Cairo, was focused on the applications of specific tools useful in this phase of developments in the Nile basin. There is a need for new approaches of negotiations between the Nile countries related to water allocation. This concerns the reframing of problems and the development of acceptable scenarios for the future. This may result in new tasks and responsibilities which is to be accommodated in the existing or new water institutions.

At project level it is important to incorporate the effect of impacts of climate change and climate variability as well as social aspects for a more sustainable development and confidence building. These were the main issues in the Capacity Building workshop on "Social development and coping with Climate Change in NELSAP projects" held in Kigali.

One of the tools that supports stakeholder processes and decision making on land and water use in the Nile basin is Waterwise. Before introducing the methods in any stakeholder processes it was considered most relevant to familiarize the 'modelers' of the NBI, the staff of the Water Resources Planning and Management team (WRPM) with the ins- and outs of the tool and indicate how Waterwise could be operative in stakeholder processes. This "Land and water partnerships" workshop was organized by WRPM on February 28, 2009 in Addis Ababa, Ethiopia

The workshops will be presented in the following chapters and describe issues like objectives, set-up, programming, implementation and lessons learnt.

2 Train the Trainer workshop on AWM

2.1 Introduction

Training is part of a capacity building programme of the Nile basin initiative and contributes to a better understanding of professionals to implement the often new tasks their organizations have to realize on water management under complexity and uncertainty. From February 19-21 Newater organized with the Applied training Programme branch of NBI a training for trainers on Adaptive Water Management titled "Learning about adaptive management in the Nile basin – Learning for interdependence" The NeWater training programme was selected by the NeWater partner in the region and the training material on these tools and concepts were fine tuned to the new perspectives in the Nile basin, on the targets for the institutions and the capability of the participants being potential trainers, researchers and practitioners.

2.1.1 NeWater training

Capacity building in the Nile basin can make use of the tools supportive to adaptive water management and which are enhanced by the NeWater project. The objective is a Train the trainers which implies that the participants are in the position to organize training to local target groups afterwards. For this an in-depth preparation phase will be needed supported by the training team. The training programme with NeWater tools has also been used for testing the training, the tools and their applicability in the region.

The adaptive water management can be projected in a AWM cycle starting after 5 steps a next cycle. The components for selection of training material in the case study areas are based on the steps identified in the IWRM cycle:

Step 1: Establish Status and Build Commitment to Reform
Step 2: Analyse Gaps
Step 3: Prepare Strategy
Step 4: Implement Frameworks and Build Commitment to Action
Step 5: Monitor and Evaluate Progress

In consultation with the representatives of the case studies the tool training has been allocated between the seven Case study areas according the need in the region. As training takes place only in one location, a transbasin exchange has been organised for representatives from other case study areas. The Nile coincides with the GWP regions Eastern Africa and the Mediterranean where tools might be applied at a later stage.

2.1.2 Training needs in adaptive water management in Nile basin

The 10 riparian states of the Nile are united in the Nile Basin Initiative for making use of the available natural resources in a sustainable way for social and economic development of the region. Important issues are the use of land and water in each of the states, the competence for negotiations and the capability of institutions for planning and implementing under complex and changing conditions. And these objectives will become effective if the

development is considered across the state boundaries. For this reason the title of the training has been formulated as:

"Learning about adaptive management in the Nile basin – Learning for interdependence"

The selected tools have specific qualities for use in one or more steps in the adaptive water management cycle. The problems are related to step one, step 3 and step 4 of he AWM cycle.

The Multi-actor Behavioural Simulation (WOPP) method shows the participants how the process of learning from people works, how to behave and interact in situations with multiple actors, ambiguous issues and diverging frames on issues of natural resources. This tool helps to establish status and build commitment to reform (step 1) in the Nile case as the political will is a prerequisite for any progress and issues like confidence building and consolidating a multi-stakeholder dialogue comes high on the list of priority actions.

Waterwise (Alterra) is a tool that introduces and discuss with the participants land and water use strategies in response to user wishes and requirements with respect to conflicting claims in the sub-basins or the whole of the Nile. Waterwise is an interface of existing eco-hydrological models and economic relations which optimize land and water use in a defined region to reach the required conditions. It helps to prepare strategy and build commitment to actions (step 4) by the interactive use of integrated assessment. The result will be a number of scenarios brought in the perspective of other national and international spatial planning processes and helps stakeholders in their negotiations.

The Search Conference approach (part of the ICIW-tool of Alterra) makes participants aware of the importance of understanding the institutions in water management well and to formulate the need for change in measures, tasks, responsibilities and structure. Implementation of change only becomes possible if one is aware of the system and understands the inhibitors of change. It helps to implement frameworks for adaptive flexible implementation planning and building implementation capacity (step 4).

2.1.3 Set-up of the workshop

The training was organized by the NeWater training team, NBI Applied Training Programme (ATP) and the Regional Centre for Training and Water Studies (RCTWS) in Cairo, Egypt.

Goals setting of the workshop, defined the level of mastering of the participants of certain skills after the training:

- Connect experiences with water management in the Nile basin to the concept of Adaptive Water Management (AWM);
- Appreciate the need to further develop adaptivity;
- Identify institutional change required for AWM implementation;
- Identify inhibitors of change and change enabling concepts and tools;
- Motivate members of a river basin community to collaborate;
- Deal with multiple actors having different perspectives and interests;
- Appreciate the model functionality offered by an integrated assessment tool as Waterwise;
- Explain how Waterwise can assist stakeholders in finding common ground.

The target group for the training are engineers, managers and tool specialists, being potential trainers involved in planning, implementation or operation in river basin projects. Their professional activities may be directed more towards training, tool application and/or towards land and water management in the Nile basin. Knowledge of the English language is presumed.

NBI-ATP selected the participants from the national offices of their capacity building programme working on natural resources subjects all being potential trainers. In addition two participants form Uzbekistan (Amudarya basin) and one from Southern Africa (Orange) assisted this training facilitated by the trans basin programme (Newater-GWP)

Composition of Participants

Burundi	*1. Management Director* *2. Technical Counsellor*	***Ethiopia***	*1. Coordinator for Research* *2. Ass. Professor*
Congo	*1. Environmentalist* *2. Water technology specialist. / Ph.D Student*	***Kenya***	*1. Executive Director* *2. Assistant Director of Water*
Egypt	*1. Manager, Head of RCTWS Laboratory* *2. Training Program Plan*	***Rwanda***	*1. Head of Laboratory (NUR)* *2. Lecturer*
Tanzania	*1. Lecturer* *2. Principal Laboratory Engineer*	***Uganda***	*1. Lecturer Civil Eng Depart, Makerere University*
and from outside the Nile basin:			
Uzbekistan	*1. assistant in Dep. Ecology and Water resource management* *2. Chief of Mathematic modeling Laboratory*	***South Africa***	*1. Director Environmental Education*

See appendix I: list of participants by country, professional background.

The NeWater training team consisted of

- Art Dewulf, Wageningen University and Research, Netherlands
- Greet François, Katholieke Universiteit Leuven, Belgium
- Koen Roest, Wageningen University and Research, Netherlands
- Bart Snellen, Wageningen University and Research, Netherlands
- Paul van Walsum, Wageningen University and Research, Netherlands

The training took place at the Regional Centre of Training and Water Studies, 6th October City, Cairo, Egypt under the guidance of Dr. Dalal Alnaggar (director RCTWS) and Dr Mohamed Bakr.

2.2 Evaluation of the Course Implementation

This chapter presents the evaluation of the course programme as it has been presented to the participants. The course programme can be found as part of the Course outline in annex II; the course evaluation can be found in annex III.

A feed-back on the tools was planned by GWP staff from eastern Africa and Mediterranean region. Unfortunately they where not able to come at the last moment.

2.2.1 Evaluation of the Course elements

Introduction to adaptive water management

Overall the response was positive, with participants stating that the topic quality was good and that the relevance was high. It was interesting for the participants and considered as a new concept of water management. More time would have been good for discussions. It was clearly presented.

The AWM exercise included: Nile basin examples of adaptive water management. It was stated that this was a good example for those working in the Nile basin, adding relevance to the concept of AWM. It was very clear.

Institutions on Water Management -ICIW

The tool Search Conference was presented as part of the theme 'Building Implementation Capacity'. In ICIW the trainees become aware of the links between functions in water management tasks in an institutional setting and apply this in strategies for implementation of adaptive water management. ICIW makes trainees aware of the links between functions in water management, the institutional setting and tasks to be implemented. Through engaging with the participants in group work and presentation 5 pertinent questions were discussed. This reflection helps stakeholders and parties involved to find appropriate ways and means to work to a feasible solution.

Some participants felt that the topic 'Identification of institutional changes required for implementing adaptive management' explained clearly that it is important to identify the institution before attempting to implement the adaptive water management approach. It was very relevant.

Multi-actor Behavioural Simulation

This tool, approaching the theme 'Dealing with multiple actors', allows learning in an experience-based way about multiparty collaboration, diverging problem definitions, dealing with different interests, negotiation and conflict management. The '*Podocarpus National Park' simulation was used which consisted of a theoretical introduction (presentation) and running the simulation. It* was a hands-on experience that made clear the use of the model. The 'Podocarpus National Park' story was a very good example for this simulation which was considered to be a good educational tool.

The Multi-actor Behavioural Simulation was most successful in quality and relevance. At the start the participants were a bit uneasy with this new approach of role playing. The open-ended and ambiguous task and role setting in the simulation made the simulated multi-actor environment an uneasy one for a number of participants – experiencing how familiar

management and decision making routines loose their self-evidence in a multi-actor context. The latter can be considered an important learning goal of the simulation. Because of the slow start-up the simulation was not completed. Judging from the extensive debriefing session participants were able to apply what they learned and that interaction and negotiation processes were as important as the content of water management strategies.

Waterwise

This tool was presented as part of the theme 'Use of Integrated Assessment models'. Waterwise is an interface for existing models on hydrology and spatial planning for optimization of economical land use us streams in relation to desired water quality and flow down-streams It can be used for land and water use planning. It covers regional hydrologic interactions, effects of land use on water quality, on agriculture and on nature.

Waterwise was shown to the participants as prototype of a Nile simulation and could not be operated by the participants as they hoped. The presentation and examples gave an introduction, but was felt to be rather brief; most comments suggested that they would have liked to have seen more on this subject. The majority stated that it had relevance and that the quality was good, but It was suggested that more could be done with the content. Time was felt short but the participants recognized however the importance of Waterwise for the integrated assessment of water management in the Nile basin and accepted the invitation to formulate further criteria and relevant goal functions for the issues they deal with under Nile Basin conditions.

2.2.2 Evaluation of general aspects

Was your expectation of the course met?

It was widely stated throughout the questionnaire that they had expected field visits and more practicable examples, especially for the Nile basin region.

Participants stated that they had learned something new, but some had hoped for more work with the program on the computer.

The organisation (of the course and training material) was very good for understanding and assimilating all the information presented, but it would have benefitted by having more time for the course.

Was there sufficient balance between theory and practical application

It was stated that the course was too theoretical without enough practical work involved. Some suggested that an applied practical would have made the workshop better, and they suggested that there were not enough practical exercises used. For others though, the balance was judged to be about right.

Were the handouts and background material useful?

Most of the materials were powerpoint presentations and it was implied that having some other methods might make the materials more accessible and memorable. It was also stated that there was not enough time to judge. Relevant learning support materials could have (helped) the course.

Logistical support provided to the participants and quality of the venue

Some stated “excellent”, and the general response was very positive.

The venue was found to be generally very good, but there was some suggestion that the dinner might have been rather on the expensive side.

2.2.3 Personal reflections

Which lessons learnt in the course contributes most to your professional development?

Meeting fellow professionals was mentioned as being an important contribution, but in terms of course content, the introduction of the concept of adaptive management and learning from implemented projects was highlighted, and the coordination required to make it work. The application of different tools in solving the natural resources management problems was specifically mentioned and modeling in general seemed important to several participants. Also noted was the simulation of collaboration and how to find solutions to conflict situations. Many participants mentioned the tools specifically; Waterwise, multi-actor simulation and ICIW. The meaning of AWM and its relationship with IWRM was also stated as being a valuable contribution.

How do you expect to apply this knowledge in the future?

Participants responded positively to this question with many suggestions. Specifically mentioned by some was the intention to engage more with stakeholders and different interest groups, but also an expressed intention to actively participate in multi-actor negotiations demonstrated the positive effect that the course had on managers, researchers and stakeholders alike.

Continuing the learning and teaching process was an intent expressed by more than one participant. Sharing the knowledge with graduate students was mentioned along with formulating concrete projects to apply ICIW concepts and the Waterwise model. Learning about learning processes and stakeholder involvement in negotiations was another concept brought up, along with the intention to use the knowledge to train others and encouraging contributions (from) different organisations dealing with water management at different levels. One participant specifically mentioned their intention to put into practice the optimization of crop allocation. The role playing game made a good impression, suggesting that it is a good way to introduce the concepts to the student. AWM was expressed by some as being a new way of thinking for water management and that it would be possible to use this in teaching a course on multi-purpose use of water resources, as well as training stakeholders to manage water resource problems.

Overall opinion of the course

It gave a good insight into AWM, and it was more like a workshop than a training event. It was suggested however, that there should be more focus on skills, negotiation skills for example. It was stated by many that the course was well organized but too short. Prioritization was an issue brought up by some, primarily in response to the large amount of information and the short time frame in which it was to be delivered. It was suggested that only the most important concepts should have been the main focus of the training. Over all the response of the participants was that it was very good, but that more practical, applied field work would have made it much better.

Open discussion was widely encouraged, and this was a popular theme. The benefits of this being that the participants could exchange knowledge and engage with each other while discussing elements of the training.

If there is anything that you would like to say, remark or comment, please feel free to do so.

More field visits, more practical work, and make the course a bit longer was the general mood of the responses. But again it was stated that especially with the short duration of the course, that it is important to organize the structure of the materials so that the main points of the training can come through clearly. Some suggested that it would be good to have a clear follow-up plan to support the efforts of the participants in their implementation of AWM skills and knowledge; follow up workshops in various countries, for example. It was widely stated that translating the materials into French would be appreciated. Some of the words not in common usage could be difficult for those without perfect English, using simpler language would therefore also be useful.

2.3 Conclusions Train the Trainers

The interest of the participants in the Train the Trainer workshop was equally shared over the tools. They appreciated the open and creative atmosphere and the efforts of the trainers to focus on the Nile issues. They would have liked more time especially for deeper discussion and exercises to practice more. The training was well organized.

The Multi-actor Behavioural Simulation was most successful in quality and relevance. However participants started a bit uneasy with this new approach of role playing. They all had a technical background and needed an introduction on the social science concepts first. As the role play progressed they engaged in and appreciated this method. They recognized the possibilities of the multi-actor collaboration model and were motivated to apply it in their own projects.

The module on institutional change was considered as relevant for the Nile. Important was that the search conferencing approach brings the participants to discover themselves the functioning of existing water institutions and that introducing change of water management measures should be connected to that.

Time was felt short but the participants recognized the importance of Waterwise for the integrated assessment of water management in the Nile basin. The Waterwise team brought back suggestions from the participants for fine-tuning.

The participants underlined the tools were applicable and useful for the issues in the Nile basin. The tools than should be fine-tuned to the issues that play on the level of application. Presentation would preferably be in English or French.

This training supported the capacity building of the NBI training institution and served as feedback for the tools with regard to their role in applied AWM cycle and for the training implementation in any follow-up training with stakeholders.

3 Social development and coping with Climate change Workshop Capacity Building in NELSAP projects, Kigali, Rwanda

The Nile Equatorial Lakes Subsidiary Action Program (NELSAP) is an investment program within the framework of the Nile Basin Initiative. The mission of NELSAP, which is intertwined with the Shared Vision Programme (SVP) of the Nile Basin Initiative (NBI), is to contribute to the eradication of poverty, to promote rapid and sustained economic growth, and to reverse environmental degradation in the Nile Equatorial Lakes Region. In order to integrate social development issues and climate change and climate variability issues in the NELSAP investment project a three days workshop has been organized by the Confidence Building and Stakeholder Involvement Project (CBSI) jointly with NELSAP on September 15-18, 2008 in Kigali, Rwanda. NeWater participated also in the programming and facilitation of the 3-day workshop

3.1 Objectives and programme of the Kigali workshop

The objectives of the capacity building workshop were threefold:

- To avail to NELSAP-related government officials and staff a more thorough introduction into issues of social development and climate change in NELSAP programs and projects;
- To build capacity of NELSAP-related government officials to integrate stakeholder involvement and poverty reduction as overriding objective in their respective programs and projects, and,
- To provide a participative forum for NELSAP-related government officials and staff to consult with each other and to reflect on past achievements, current priorities and operations, and future direction.

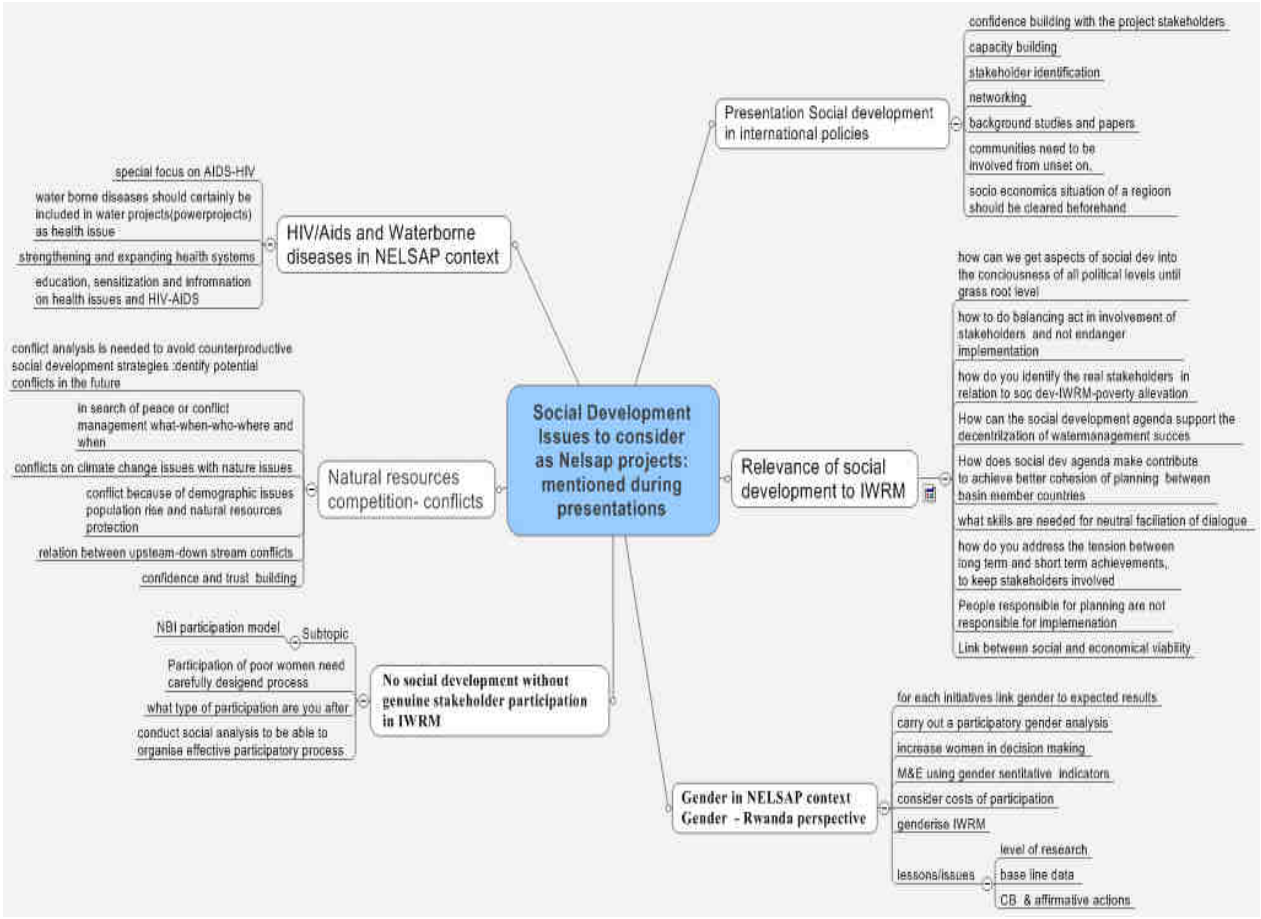
The first two days of the workshop focussed on the issue of social development as guiding principle in the NELSAP projects. For each NELSAP project actions plan have been developed describing enhancements for addressing specific social development issues. The third day dealt with climate change and climate variability. Specifically, in this part of the workshop the participants discussed how NELSAP project could better reduce risks due to climate change and climate variability and how the social resilience could be improved. Annex 4 provides an overview of these expectations. Annex 5 provides a detailed program of the workshop. Annex 6 gives examples of intermediate outputs on some of the projects.

3.2 Social development perspectives relevant for NELSAP projects

A number of the keynote speeches on various social development issues were given: *Social development in International Policies // Linking social development to IWRM // Natural resources-based conflicts: Implications for NBI Development Programming // HIV/Aids and Waterborne diseases in NELSAP context Changing Climate and Health // Gender in NELSAP context: Gender Mainstreaming in Community Development Programs // No social development without genuine stakeholder participation in IWRM.*

All project presentations are included on the CD provided to the participants.

Mind map 1 summarizes the discussion on the various key note speeches. The key issues and lessons drawn formed the basis of the subgroup discussions on the social development issues that are of utmost importance to the six NELSAP projects.



3.2.1 New insights

Based on the key note speeches as described in the previous paragraphs, in subgroups, the participants discussed the new insights and lessons in relation to the NELSAP program and projects. Furthermore, they identified those social development perspectives that are of relevance to the NELSAP program and projects. For each perspective the reasons why it is considered relevant is formulated and presented. Based on the lists of social development issues identified by the seven groups the following list of most important issues was drafted. The score referred to the number of groups that selected that particular social development perspective.

Considered as most relevant social perspectives for ongoing and future ENSAP projects are specific issues like mainstreaming gender aspects, health aspects like AIDS and water born diseases, poverty reduction, ethnic conflicts, resource conflicts. As project approaches was mentioned awareness raising, communication, governance and stakeholder involvement.

3.2.2 Do NELSAP projects address the identified relevant social perspectives?

Six NELSAP projects were briefly presented: *Mara Transboundary Integrated Water Resources Management and Development project // Regional Rusumo Falls Hydroelectric and Multipurpose Project // Transmission Lines Project // Kagera Transboundary Integrated Water Resources Management and Development project // Sio-Malaba-Malakisi Transboundary Integrated Water Resources Management and Development project // Lakes Edward and Albert Fisheries Pilot Project.*

All project presentations are included on the CD provided to the participants. The participants were asked to assess the way the NELSAP programme and projects address the 17 identified relevant social perspectives. For each NELSAP project one or two ambassadors have been appointed. The other participants have been divided into six groups. These groups have visited the presentations of all six NELSAP projects and have discussed with the project ambassadors the way in which the project already addresses the most important social perspectives that were identified during the first workshop day. Finally there was a scoring to the extend social issues has been addressed in the project.

3.2.3 Lessons learnt and action planning for social development in NELSAP projects

The NELSAP project managers have been subjected to a peer review of their colleagues (six times). Based on the discussions with the six groups of colleagues visiting them, they selected the most important social issues to be worked out further.

Based on the insights derived from the peer assessment the participants discussed how they can better address social development issues in their NELSAP projects. For each project three major actions were defined and elaborated upon. The actions were specified by answering the which, why, what, who, when and how questions. This action planning was carried in project groups. Hereafter, a summary of the results on action plans is provided.

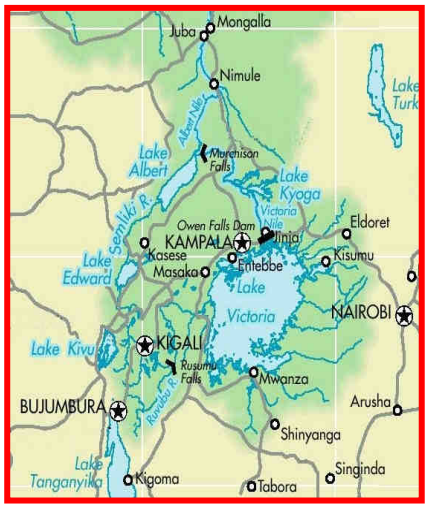
3.3 Coping with climate change and variability in NELSAP projects

On the 3rd day the programme was devoted on the possible impacts of climate change and climate variability (CC and CV) in the NELSAP projects. The projects were assessed from two different view points. One was: avoiding the risks caused by climate change and climate variability was. The other was: adapting capacity to be able to better cope with climate change and climate variability.

3.3.1 Inspirations on CC and CV in Nile basin

The participants were introduced on the various aspects CC and CV may provoke in the region by the following presentations: *Climate change and climate variability in the Nile Basin: Opportunities and risks // Examples of adaptation measures for coping with climate change // Coping with climate change: Process principles // Coping with climate change: Methodologies //* Environment challenges within the NELSAP region.

Environmental challenges within the NELSAP has been shared with the participants on issues like: the environment diversity and richness of the region; the ecosystems services provided to communities and; the existing threats in the region. Amongst the upcoming environmental challenges climate change is an important threat giving rise to mitigation and adaptation. Such events are a reported and discussed at the Africa Climate Change Forum



3.3.2 Future Opportunities and risks for coping with CC and CV

In the second part of the climate-day the participants were given the opportunity to make an inventory of opportunities and risks of CC and CV within NELSAP projects over the period to 2020**.** Strategies were discussed for reducing risks and increasing adaptive capacity for (better) coping with CC and CV within NELSAP projects

In the smaller groups participants discussed what are the major strengths, weaknesses, opportunities and threats within the NELSAP project regarding 'reducing risks and increasing adaptive capacity for better coping with CC and CV.

The participants than were asked to reflect 10 minutes on their own story 2020 they would tell their children or grand children on reducing risks caused by CC and CV and on adaptive capacity to better cope with CC and CV.

These stories were written down in key words on a big sheet and shared with the other members of the project group. Than the groups members selected together the best three

strategies for reducing risks and/or increasing adaptive capacity for better coping with CC and CV. The results were put on flip over paper and in lap top.

3.4 Conclusions and results of the 3-days Kigali workshop

Conclusions and results of the on social development and coping with climate change and climate variability workshop held in Kigali Ruanda in September 16-18, 2008

The direct output for participants and projects was:

- The social perspectives important for NELSAP projects were explored thoroughly and resulted in 17 prioritized issues that need to be addressed at the Program and Projects level egg. and 15 action plans were elaborated smartly for the projects with attention to e.g. land tenure, resettlement and water borne and other diseases and governance/ conflict management.
- Awareness creation on how to develop dialogue and stakeholder participation on social issues and aspects of climate change and climate variability.
- Joint fact finding on climate issues in the Nile basin and its consequences for the NELSAP project and a definition of key adaptation strategies in the projects and measures specifically based on very personal future oriented input of the participants.

The workshop outputs related to capacity building are as follows:

- Improved capacity of Government and NELSAP staff to integrate social development and climate aspects in investment projects;
- Identified opportunities for climate proofing and addressing social development in the NELSAP investment projects;
- Identification of the way forward with social issues and climate change mainstreaming into the NELSAP projects activities.

4 Land and water partnerships workshop, Addis Ababa, Ethiopia

As follow-up of the Train the Trainers workshop in Cairo and the NBI related workshops on climate change and stakeholder involvement in Kigali there was sufficient input and clear direction to further develop the spatial planning – water system requirements which form the basis for proper land and water partnerships. The Waterwise model was developed in more detail for an exchange with the Water Resources Planning and Management (WRPM) group in Addis Ababa, the group which is responsible for the decision support to NBI countries for the hydrological systems of the Nile and its sub-basins. This also gave the opportunity to meet with the Eastern Nile branch of the Confidence Building and Stakeholders Interaction (CBSI) group, mainly responsible for stakeholder processes around ENSAP and NELSAP projects and supportive to the Vision.

4.1 Waterwise for spatial planning scenarios

The focus of the workshop was on the applicability of Waterwise as planning and assessment tool for spatial planning in the Nile basin and as support to stakeholder processes for a common Nile policy on benefits of the water resources. Waterwise was set-up as prototype to provide scenarios to indicate the most profitable investments in land and water use to meet certain pre-set objectives for hydropower and agricultural production. In this way the NBI-countries were able to see their potential contribution to a common natural resources policy. Investments and incomes were calculated in the following water related sectors: soil and water conservation, irrigated and intensified agriculture and hydropower. Aspects as climate change, the level of investment and the millennium goals were taken into account as formulated as priorities in the Shared Vision Programme of the Nile Basin Initiative.

4.2 The programme and discussion

The workshop was planned in the WRPM office in Addis on Saturday February 28, 2009. The NeWater team from Wageningen invited by NBI-WRPM was composed of Paul van Walsum and Koen Roest (both Alterra) and the members of the NBI-WRPM were Hesham Ghany, Abdulkarim Seid, El Nasser Abdel Wahib and Ephrem Getahun. Not present were Dr Solomon Abata of the Eastern Nile Technical Regional Office (ENTRO) and Dr Wubalem Fekade of the CBSI group.

The following programme was set:

1. Introduction Newater and Waterwise (Koen Roest)
2. Waterwise application for the Nile (Paul van Walsum)
3. The Nile DSS (Abdulkarim Seid)
4. Tests performed with Waterwise (Koen Roest)
5. Wrap-up discussions

From the presentations and discussion it became obvious that the DSS tools of WRPM and the Waterwise are complementary and could be applied in different fields and levels. Hesham praised Waterwise function for '*integrating land use planning processes with water management problems*'. Working together with WRPM would broaden the package and give access to more data to increase the applicability of Waterwise. Interface with agronomic and economic simulation or evaluation models on regional scale would enhance its regional applicability.

For model development and research the concept of Waterwise is an asset as it includes investments and operational cost. Data input however needs improvement with the assistance of the WRPM.

For further application in stakeholder processes attention should be paid to the aspect of land and water use as national spatial planning issues may be delicate at political level as it may make hidden negotiation agendas transparent. For awareness raising and broadening the view of stakeholders Waterwise could play an important role as interactive tool and could help the riparian dialogue. This becomes more effective as the DSS work will have branches at the NBI-offices of the 9 Nile countries.

4.3 Follow-up

For follow-up the NBI is very eager to learn more on the aspects of climate change and climate change adaptation and to the application of Waterwise at watershed level, for future cooperation. More research, in close collaboration with research groups from the Nile Basin countries on the relation between water management and land use planning was suggested on a smaller scale than the complete Nile Basin. Training of the junior WRPM group in the Netherlands was considered as a fruitful undertaking. Presentation at the supranational meetings of the TAC next April in Entebbe is still too early also because land- and water use changes are not yet on the political agenda of NBI for an open discussions.

5 List of references

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6 Annex I: List of Participants Train the Trainer Cairo

RCTWS, Cairo, Egypt, February 19 – 21, 2008

Pascal Barutwanayo *Burundi* *Position: Technical Counsellor*	**Willy Ndayikeza *Burundi*** *Position: management Director*
Sikulisimwa Pole Celine ***Congo*** *Position: Water technology specialist. / Ph.D Student*	**Martin Ngoie Lubwika** ***Congo*** *Position: Environmentalist*
Safaa Youssef Mohamed ***Egypt*** *Position: Work manager, Head of Laboratories-RCTWS*	**Khaled Roushdy Ibrahim** ***Egypt*** *Position: Training Program Plan*
Dereje Hailu ***Ethiopia*** *Position: Ass. Professor*	**Mekonen Ayana** ***Ethiopia*** *Position: Coordinator for Research*
Maro Andy Tola ***Kenya*** *Position: Assistant Director of Water*	**Mwalimu K. Musau** ***Kenya*** *Position: Executive Director*
Coletha U. Ruhamya ***Rwanda*** *Position: Lecturer*	**Mardochée Birori** ***Rwanda*** *Position: Head of Laboratory (NUR)*
Jim Taylor ***South Africa*** *Position: Director Environmental Education*	**Abel Pallangyo** ***Tanzania*** *Position: Principal Lab Engineer*
Johnson Malisa ***Tanzania*** *Position: Lecturer*	**Apollo Buregyeya** ***Uganda*** *Position: Lecturer Civil Engineering Department, Makerere University*
Andrey Savitskiy ***Uzbekistan*** *Position: Chief of Mathematic modeling Laboratory*	**Marina Timirova** ***Uzbekistan*** *Position: assistant in Dep. Ecology and Water resource management*

7 Annex II Course outline

Train-the-trainer workshop

LEARNING ABOUT ADAPTIVE MANAGEMENT IN THE NILE BASIN

LEARNING FOR INTERDEPENDENCE

Summary

In the NeWater project several steps are distinguished throughout the Adaptive Water Resource Management (AWRM) cycle. Each of these steps involve several themes. In answer to the needs of water managers in the Nile basin (and subsequently the trainers of the water managers) this course will focus on 3 themes.

1. Dealing with multiple actors, ambiguous issues and diverging frames, which is important to build commitment for a process of collaborative water management. A multi-actor simulation 'Podocarpus National Park' will be used as a learning tool.

To bridge the gap with the 2nd theme (below) examples will be given of land and water management strategies for the Nile basin involving the sharing of costs and benefits. This will demonstrate the advantages of collaboration through water-space partnerships. The examples will be discussed using the concepts learned in the Podocarpus simulation.

2. The use of integrated assessment which will contribute to the preparation of strategy and action plan and to building commitment to specific actions. Waterwise will be introduced as an 'inverse' tool for preparing strategies in response to user wishes with respect to conflicting objectives for the Nile basin and its subbasins. Crucial steps involving stakeholder involvement are discussed: a) what are the objectives of water management and b) what kind of measures are considered to be interesting options.

On-the-spot calculations will be done with simplified models that have been prepared beforehand. The simplification is forced due to the limited availability of data and of willingness to supply existing data. The simplification is also needed for reducing the computational effort (quick response time is needed.)

3. The capacity for implementing AWRM depends on a persons ability to reflect, communicate and act on the need for changes in water management. Participant's capacity for independent thinking will be stimulated through an individual essay writing exercise. Communication skills are enhanced through a workshop, in which participants share and debate the insights they achieved from writing their essay. The last step is formulating action plans for change.

2. Goal of training

Theme Adaptive water resource management (AM)

Connect experiences with water management in the Nile basin to the concept AM as developed and understood in the NeWater project ; understand the need to further develop adaptivity ; make sense of AM with key stakeholders and therefore locate the meaning and implications for implementation together.

Theme Dealing with multiple actors

This part of the training aims at motivating members of a stream basin community to collaborate and showing them how: by learning people how to behave and interact in situations with multiple actors, ambiguous issues and diverging frames. The context used for learning this is the domain of natural resources management.

Theme Use of integrated assessment

Stakeholders should become familiar with the model functionality offered by an integrated assessment tool Waterwise that has been implemented within an optimization framework. The training should assist stakeholders to find common ground for options to consider. It should motivate the stakeholders to invest in this kind of tool by:

- thinking further about objectives and land/water management options for the Nile basin;
- providing data.

A subgroup of the technically proficient participants should be introduced to the 'works' of Waterwise, thus providing 'seeds' for the dissemination of confidence in the used techniques.

Theme Implementation of AM

Understand the context of 'independent' working methods of water institutions in the past and why institutional arrangements of the past are no longer adequate today. Gain awareness of institutional change required for AM implementation. Understand the inhibitors of change. Gain awareness of change enabling concepts and tools.

3. Background on AM

The concept of AM has been designed primarily to deal with uncertainties. AM has been described as a systematic approach to improving management and accommodating change by learning from the outcomes of management policies and practices. Although many people and disciplines tend to have a differing description of AM researchers in the NeWater project developed a framework on AM regimes, and on skills and tools playing an important role in stimulating the further development of an adaptive water management system. In training sessions a number of (skills and) tools will be connected to the AM decision cycle and it will be demonstrated how they can contribute in practice to more adaptivity.

4. Background on theme

Theme Dealing with multiple actors

The background theory offered in this training session will focus on multi-party collaboration concepts, on framing and reframing as a process, and on interaction patterns for dealing with differences.

Different social actors tend to acknowledge and highlight different aspects of reality as problematic, because of their specific experiences, and their frames to give sense to these experiences. The construction of the content of a problem domain implies indicating that certain phenomena have to be dealt with, and information about is relevant, while other data become irrelevant. Which actors are taking part in the definition of the problem will determine how the problem is defined. Vice versa, how a problem is defined and framed, determines if certain actors are included in it, or excluded from it.

Constructing the problem domain is about bridging the duality between the social and the natural environment. While learning together how to deal with the interconnected issues of their natural environment, people also learn how to deal with each other and their interdependence.

Although natural resources management and planning is an institutional and interinstitutional affair, it is in the direct interactions between individuals representing their constituencies that information and meanings are interchanged, and that decisions are negotiated. However the ways in which individuals represent their organizations can vary widely, hence also how they act and react towards the multi-party setting. The kind of representation and the type of constituency (institutionally developed or "under organized", homogeneous or heterogeneous) will influence this interchange between the multi-party and the particular parties.

One of the major challenges of representatives is to manage the boundaries between their organization and the others involved in a shared domain. They are the persons in contact with other organizations, and so through them different types of – eventually even – confidential information will be shared or restrained. The dilemma of the negotiator refers to the growing tension that representatives may experience between the expectations of their constituencies, and of the multi-party group. They play an important role in transforming competitive (win/loose) in collaborative (win/win) relationships between parties.

A strong leader, e.g. a public authority, stating what has to be done, how it will be done, and who will be part of it, can eventually advance the multiparty initiative towards quick results. From a technical point of view, such results risk to be sub-optimal (not having taken into account all relevant information). From a social-relational point, a strong leader incites to a high dependence (from the followers, the actors favoured by his leadership), and/or resistance or counterdependence from those actors that feel excluded or put at a disadvantage. It is precisely the openness of the process that can generate innovative and creative solutions, and that is necessary to weave an interdependent relational network.

Facilitators (explicitly designated or implicitly functioning as such) can fulfill an important role in dealing with this tension. They take care that relevant ideas and actors stay involved.

Theme Use of integrated assessment

Use of integrated assessment is needed as single issue solutions are not possible. (no further theory presented here for the purpose in this workshop).

The background information offered to the above-mentioned subgroup of technically proficient stakeholders will involve:

- an outline of the models
- an overview of the data files;
- hands-on experience using a ‘demo’ that can be run using the Student’s edition of the used optimization package (DASH Xpress)

Theme Implementation of AM

This part of the training is an adaptation of an international course on Institutions in Water Management (ICIW), which is organized annually by Alterra-ILRI in The Netherlands. The course explained the organization and institutional arrangements for water management in The Netherlands. It also included subjects such as objective-oriented planning, with practical applications in case studies from the home countries of the participants.

The current ICIW training uses Integrated Water Resource Management (IWRM) as the state-of-the-art approach in water management, rather than the Dutch experience. It can be shown that the Dutch water management 25 years ago and nowadays is doing exactly the opposite. Therefore the topic of change holds a central place in the training. Independent thinking is a key characteristic of the training.

The core of the training is writing an individual essay on the need for changes in water management, answering 5 questions: Why could water institutions in the past work fairly independently ? Why are the institutional arrangements of the past no longer adequate today ? What major institutional changes are required for implementing AM ? What are the main difficulties in implementing these changes ? What concepts and tools are available for resolving these problems ?

Additional course elements (lectures, exercises, case studies, excursions) aim to provide other tools and concepts, but *not a complete toolbox* to solve *all* problems. *This course only provides the start for a never-ending learning exercise.* The course ends with a workshop in which participants first share, then debate, the insights they achieved from writing their essay. The next step is formulating actions for change as a result of the insights that survived the debate. Rather than making recommendations to others, participants are challenged to formulate actions they can start initiating themselves.

5. Background on training methods and schedule

Theme Dealing with multiple actors

The use of a behavioural simulation as a learning tool is based on the assumption that experiences in real-time and real-life situations are most helpful to learn how to behave and to discover appropriate ways of interaction among different actors. Moreover a behavioural simulation creates a safe environment for different stakeholders to learn together. The situation that is simulated is different from their daily work and life environment. This distance makes reflection on their collective experiences easier. At the same time the training is an opportunity for the stakeholders to develop their group capacity for acting and learning together.

The underlying theoretical concepts might be introduced through rather short lectures. An important part of the simulation training however is the debriefing following the role play. There the experiences of the trainees are discussed. The trainers bring in the observations they made (written and video) and use them to illustrate and explain the theoretical concepts.

The role descriptions and maps used in the role play must not be seen in advance by the participants. Having the simulation material at one's disposal however is not enough to provide a successful training. The trainer skills are evenly important. For these methodical reasons the simulation is not publicly available and the tool developers offer training and guidance to learn to work with the simulation.

Theme Use of integrated assessment

The emphasis is on learning by doing. For the group of stakeholders, mainly policy makers (non modellers), this is partly done by demonstrating the Waterwise tool, i.e. by generating various strategies on the basis of their 'questions' to the available provisional model, and discussing the results.

In a later stage, the model can be further developed to address the specific case more into detail.

For the modellers, the hands-on approach includes trial use of the model.

Theme Implementation of AM

As part of this NeWater course the initial ICIW training will be shortened by using more focused documentation rather than let the participants search for it themselves in libraries and on the internet. Also the trainers who will participate in the NeWater course do not necessarily have to go through the entire writing experience. It would be sufficient for them to grasp the idea of what the writing experience is expected to do for water managers. The writing can also be replaced by the formulation of short provocative propositions by each participant, which can be responded to by other participants either in writing or through group discussions. The choice between the individual writing exercise and the propositions could also depend on the expected writing skills of the participants.

6. Target group

The NeWater training is intended for people who are in the position to afterwards give training themselves to practitioners in the Nile basin and thus disseminate further the insights on AM and the management skills related to it. What follows is a theme specific description of the target group, when appropriate.

Theme Dealing with multiple actors

People involved in the planning, implementation or operation of the Nile basin, willing to learn about collaborative processes and about their own behaviour. (They will meet themselves in the kind of roles they take and the way they face unfamiliar challenges.)

At least 15 up to 30 participants.

Theme Use of integrated assessment

There are two groups, the second being a subgroup:

- practitioners involved in the Nile basin land and water management; they are expected to have a basic understanding of the land and water processes in the basin; knowledge of English is presumed;
- a subgroup that is familiar with computer models; knowledge of optimization techniques is an advantage, but not required.

Theme Implementation of AM

Engineers and managers involved in planning, implementation or operation of river basin projects in one or more of the following disciplines: irrigation, drainage, hydropower, flood control, soil and water conservation.

- managers who have operational knowledge and project mgt experience in the implementation of IWRM at river basin level

- preferably MSc level of education or minimum undergraduate level in subject specialism

7. Session plan

The whole training took 3 days. Presented below is the session plan as implemented.

However lack of time has been mentioned by several participants in the evaluation and a duration of 5 days was suggested.

Theme Adaptive water resource management (2 hours)

- lecture introducing the concept of Adaptive Management

- collecting experiences from participants with water management problems and how they have been tackled (solved) => group discussion on these examples and adaptivity in water management

Theme ICIW (2 hours)

Theme Dealing with multiple actors (1 ½ days)

- theoretical introduction (30 min.)

- instructions to the simulation (15 min.)

- playing the multi-actor behavioural simulation (3 hrs)

- general debriefing (30 min. to 2 hrs)

- group task on frame analysis (45 min.)

- theory on framing (30 min.)

- group task on frame interaction analysis (45 min.)

- session in which parallels are made between the simulated Podocarpus situation and the real Nile basin situation

Theme Use of integrated assessment (1 ½ day)

- introduction to the type of model functionality provided by Waterwise, and the kind of stakeholder input that is required;

- introduction of a subgroup to the 'works' of Waterwise;

- online session involving the whole group of participants involving calculations with an 'advanced dummy model' of the Nile basin;

- closing session with outlook, how to proceed.

Theme Implementation of AM (1 ½ day)

- plenary session: overview of training on current river basin management practices and main problems in the Nile basin

- discussion of an appropriate field excursion the trainers could deliver to groups of water managers

- session on how to run a finalizing workshop

- session on how to facilitate the individual writing exercise

8. Background and teaching materials

Theme Dealing with multiple actors

Reading materials:

Gray, B. (2003) Framing of environmental disputes

Vansina & Taillieu (1997) Diversity in collaborative systems

Vansina L., Taillieu T. and Schruyer S. (1996) Managing multiparty issues - learning from experience

Gray B. (1989) Chapter 3, The collaborative process

Bouwen R. & Taillieu T. (2004) Multiparty collaboration as social learning for interdependence

Dewulf, Craps & Dercon (2004) How issues get framed and reframed

Dewulf et al. (2005) Integrated management of natural resources

Powerpoint presentations in relation to the theory applied:

- Framing in multi-actor collaboration: an introduction.

- Issue framing: an introduction.

List of observation tasks for trainers during the role play.

As part of the multi-actor simulation 'Podocarpus National Park'

- powerpoint introduction/instruction

- labels for participants

- general context description (5 pages)

- role descriptions for each of the 5 stakeholder groups

- maps of the park : A3 colour maps for each stakeholder group

Theme Use of integrated assessment

The following Newater deliverables are available:

- 1.4 : Framework for integrated design of water and land management systems; towards robust water-space partnerships as a basis for adaptive water management.
- 4.2 : Newaterwise, a planning tool for adaptive land and water management.

Further information about Waterwise on www.waterwijs.nl

Theme Implementation of AM

Reading material : Background document on development of river basin management issues in Nile basin: past, present and future. If this document is not readily available from the case study team, the lecturer will present material from comparable river basins.

List of questions (5) for discussion

Instructions for writing assignment

Instructions for preparing propositions

Guidelines for organizing final workshop

Software: demo for interactive preparation and modification of propositions

9. Terms of reference of trainer

Theme Dealing with multiple actors

Knowledge and insights on multiparty collaboration, framing theory and interaction patterns. Good observation, feedback and facilitation skills are important. Future trainers should at least once have experienced what it is to do this multi-actor simulation.

Theme Use of integrated assessment

Ability to use Waterwise

Ability to translate the Nile situation to Waterwise and vice versa

Ability to work with high level policy makers (stakeholders) as well as with modellers (hands-on users)

Theme Implementation of AM

Experience in group facilitation and in powerpoint presentation delivery. Knowledge of participant background, adaptive management basics and change management basics.

10. List of participants

- Pascal Barutwanayo, Direction générale de l'hydraulique et des énergies rurales, Bujumbura, Burundi
- Willy Ndayikeza, Directeur des Aménagements SRDI, Bujumbura, Burundi
- Coletha Ruhamya, lecturer at Kigali Institute of Science and Technology, Rwanda

- Birori Maridochée, head of Water Quality Laboratory, National University Rwanda, Butare
- Martin Ngoie Lubwika, Democratic Republic Congo
- Céline Pole Sikulisimwa, lecturer University of Kinshasa, Democratic Republic Congo
- Apollo Buregyeya, assistant lecturer Makerere Univeersity, Uganda
- Johnson Mallisa, Tanzania
- Abel Pallangyo, Tanzania
- Mwalimu K. Musau, director Kenya Water Institute, Nairobi
- Andy Tola, Kenya
- Dereje Hailu, assistant professor Addis Abeba University, Ethiopia
- Mekonen Ayana, lecturer Arba Minch University, Ethiopia
- Safaa Youssef Mohammed Fath-Allah, Regional Centre for Training and Water Studies, Cairo, Egypt
- Khaled Roushdy Ibrahim Elshatry, Regional Centre for Training and Water Studies, Cairo, Egypt
- Jim Taylor, Wildlife and Environmental Society, South-Africa
- Marina Timirova, assistant, Tashkent Institute of Irrigation, Uzbekistan
- Andrey Savitskiy, chief Modeling Lab, Water Ecology Center, Tashkent, Uzbekistan

11. Finance

As explained above (5. Background on training methods) the training tool 'Podocarpus National Park' is not freely available. To be contacted for further agreements : art.dewulf@wur.nl

As Waterwise is developed with NeWater resources (as many other tools) it is available for NeWater purposes. The source is open, thus encouraging knowledge transfer.

In this train-the-trainer session training staff was NeWater funded. Travel and subsistence costs training staff have to be budgeted. Location, teaching equipment, catering etc. are remaining costs as well. Once participants, date and venue of the Nile basin session are finalised an overall budget will be reported as indicative.

12. Logistics

Theme Dealing with multiple actors

A plenary room where tables and chairs can be moved. Additional smaller rooms or meeting corners for 5 subgroups. In the plenary room: flipover, beamer and laptop. Equipment for audio and video recording is also installed in the plenary room.

Theme Use of integrated assessment

Additional to what is given above:
- a fast internet connection,

Theme Implementation of AM

Plenary room with moveable chairs and break-out rooms for group discussions. Beamer, writing materials, software, PC access.

13. Evaluation

Participants were asked to evaluate relevance and quality of the course content. For each session a score ranging from 1 to 5 could be given, as well as comments.

1 = not relevant ... 5 = very relevant

1 = not good ... 5 = very good

Participants opinion was asked on the following general aspects:

- was your expectation of the course met?
- were all relevant topics covered and was enough time dedicated to them?
- was the balance theory - practical application ok?
- were the hand-outs and background material ok?
- was logistic support provided to the participants ok?
- were the food and lodging arrangements ok?

Some personal reflections could be made as well:

- which lesson learnt in the course contributes most to your professional development?
- how do you expect to apply this knowledge in the future?
- your overall opinion about the course is ...
- if there is anything you would like to say, remark or comment, please feel free to do so.
- do you consider it as useful to translate the training material?

8 Annex III: Course Evaluation

Report : Course Evaluation by participants

This evaluation form serves the purpose to find out how participants appreciated the training course and how it could be improved. We thank you very much for taking the time to give us your view.

Part 1 Course content

Below please indicate for each subject your mark for relevance and the quality of how the presentation or exercise was carried out.

Relevance: 1 = not relevant, 5 = very relevant *Quality: 1 = not good, 5 = very good*

Subject	Relevance	Quality	Comment
Introduction to adaptive management (presentation)	4,18	4,24	(12) Clear (17) It was interesting for me because it is a new concept of water mgt. (18) More time to be allowed for discussions.
Exercise: Nile basin examples of adaptive water management	3,94	3,94	(12) Clear (17) Good example for us, who are whith the Nile basin countries. (18) Very relevant
ICIW (part 1): Identification of institutional changes required for implementing adaptive management	4,29	4,00	(12) Clear (17) It is important to identify the institution for before to implement the adaptive management. (18) Very relevant
Podocarpus National Park: introduction (presentation) and running the simulation	4,25	4,20	(3) Sorry, I was absent. (8) Practical (12) Clear (13) 5! (17) Good example for this simulations. (18) A good educational tool
Podocarpus National Park: debriefing part 1 (tuesday evening)	3,76	4,06	(12) Clear (13) 5! (18) Educative
Podocarpus National Park: debriefing	4,54	4,46	(12) Clear

part 2 (wednesday morning)			(18) Educative
Waterwise: presentation and examples (wednesday afternoon)	3,94	3,80	(8) Need more (12) Clear (14) And want more (18) A lot (?) needs to be done in content.
ICIW (part 2) (thursday morning)	3,76	4,20	
Waterwise (part 2) (thursday afternoon)	4,07	4,13	(12) Was not clear (18) Issues raised important
Setting up a training course for practitioners/stakeholders.	3,83	4,17	

Part 2 General

Please tell us your opinion about the following aspects of the training course.

Quality: 1 = not satisfactory, 5 = very satisfactory

Organisation of the training course	Quality	Comment
1. Was your expectation of the course met?	4,06	(1) I expected field visits and practicable examples. (7) I would have liked more expertise from the Nile basin region ! (8) I learn something new. (12) Ok (15) I hope more work with program on computer. (17) Organisation it was very good for us to assimulate all courses. (18) More time should be given to the course.
2. Were all relevant topics covered and was enough time dedicated to them?	3,50	(12) Ok (13) Not enough time (14) I want more !

		(17) Many topics, but enough time
3. Was the balance between theory and practical application ok?	3,56	(1) The course was too theoretical rather than practical. (7) One applied practical would have been good. (12) The practicals were not enough. (17) The theory and practical, it was the balance.
4. Were the hand-outs and background material ok?	4,17	(1) Most of the materials were powerpoint presentations. (3) Not enough time to judge. (7) Relevant learning support materials could have (?) the course. (12) Ok
5. Was logistical support provided to the participants ok?	4,65	(3) Can not judge as I am from the center. (7) Excellent
6. Were the food and lodging arrangements ok?	4,18	(3) Can not judge as I am from the center. (6) 10 USD is too much for dinner (quality). (7) Excellent

Part 3 Personal reflections

Which lesson learnt in the course contributes most to your professional development?

1. Adaptive management ; Podocarpus National Park
2. Waterwise ; ICIW
3. Multi-actor collaboration ; AM
4. The issue of adaptive management and learning from implemented project managements
5. Waterwise model
6. Application of different tools in solving the natural resources management problems.
7. Meeting fellow professionals
8. Podocarpus National Park ; Waterwise ; Adaptive management
9. Introduction to adaptive management
10. Importance of coordination in adaptive water management
11. Modelling
12. Simulate of collaboration and how to find out solutions to a conflict
13. The meaning of AWM and its relationship with IWRM
14. Waterwise
15. Modelling
16. Oui, ça contribue dans mon travail du fait que nous sommes dans le domaine de l'environnement.
17. Podocarpus National Park for Adaptive Water Management
18. Multi-actor process ; Waterwise

How do you expect to apply this knowledge in the future? (If possible, give an example)

1. Learning processes and stakeholder involvement in negotiations
2. Share the knowledge with graduate students and formulate concrete projects to apply ICIW concepts and the Waterwise model.
3. By conducting training at the national level in the workshop subjects ... except the model.
4. I will focus more to work on adaptive management and know further.
5. Managing water basin in my country.
6. Managing water basin in my country with different interests groups.
7. I hope to strengthen my ability in providing T of T training sessions.
8. In all practical work (at university during courses)
9. In participating to the multi-actor negociations

10. Use the knowledge in training others. Contributions in different organs dealing with water management in different levels.

11. (?) development and partnership

12. When I will be back in my country (in my societe) I am going to take to my collaborators "interdepandance" in water distribution.

13. -

14. Yes ! I will try to put on my work ideas that crop pattern can be optimized too ! I will do this definitely.

15. Role game very interesting introduce to study program of student. The adaptive management is new method of WM and I can again use in teaching course on multi-purpose use of WR.

16. Je pense utiliser d'abord par les informations dans la population et un jour appliquer de la nature.

17. Je veux appliquer ce connaissance dans mon pays pour la gestion de l'eau et surtout que cet un nouveau concept de gestion de l'eau.

18. Training of stakeholders in managing Water Resource problems. Water resource planning is a good field that will utilize Waterwise model.

My overall opinion about the course is …

1. Good

2. It gave me a good insight into AM. It was more of a workshop than a training. Focus on skills should be given i.e. negotiation skills.

3. Very good but too short.

4. Some of the issues handled were not in line with the training theme. So, more time could have been devoted for important matters.

5. Well organized

6. Is good but should be done in more than 3 days to allow more discussion and hands-on training sessions.

7. Very good. More applied practical field work would have been good. More relevant Learning Support Materials ...

8. This training is a success and is useful for a trainer I'll become.

9. Good

10. The course is good.

11. Good

12. Ok

13. Open discussion was widely permitted. It was very interesting and useful workshop. Work groups were very beneficial because through which we could exchange experience.

14. Nice. Only one detail, all presentations can be exactly in time schedule.

15. Very useful for people work with water resources, but if in lectures will be more examples from different regions of the World.

16. Mon opinion est que ce travail nous permettra de bien avancer.

17. Tous les cours ont été très importants pour moi, mais le temps de son assimulation était trop court.

18. It is very relevant and more time should be given to it.

If there is anything you would like to say, remark or comment, please feel free to do so

1. More field visits, more practicals. Course to end a bit early, make the course a five days one.

2. -

3. Thank you Koen & Greet

4. Training material is not well organized. The issues handled are not focused to the theme.

5. N/A

6. Examples (and hands-on training) should (?) neglect the current problems in Nile basin countries or one of the countries in this basin.

7. Friendly and helpful presentations through out. More African presentations ? The 5-point Likert scale can be counterproductive. It emphasizes what people enjoyed ! But learning can be a struggle and participants then score the question low ... but actually learnt more !!

8. Nothing special, just thank the whole team for the job they have done in this training.

9. -

10. It would have been good to evaluate every course.

11. More practical(s) and illustrations

12. -

13. Time have to be increased. Work group may occupy more time because they may be more useful than lecture. Some presentations were so fast due to the limited time. More exercises are needed.

14. I understand this is difficult, but will be good to organize training course at least 10 days.

15. More exercises.

16. -

17. –

18. A clear follow-up plan to support efforts in implementation of AM - skills and knowledge. E.g. follow-up workshops in (?) countries.

Translation of training material	**also French** **6**	**English only** **9**

9 Annex IV Participants Kigali worskhop

KIGALI WORKSHOP ON SOCIAL DEVELOPMENT ASPECTS AND CLIMATE CHANGE AND SOCIAL ADAPTABILITY 16-18 September 2008, Kigali, Rwanda

BURUNDI	
KAYITESI, ODETTE Director General - IGEBU / NELTAC Member Institut Géographique du Burundi	**IDI BUHANGA, PRESSADI** Director General of Water and Energy Ministry of Water, Energy and Mines
NKURIKIYE, ANICET Kagera RPSC Member	**KANYARUSHATSI, JEAN FLORIBERT** Special Advisor to the DG-REGIDESO
BARINDOGO, VENANT Ministry of Environment, Land Management and Public Works	
D. R. CONGO	
MAWALALA NZOLA MESO, AUGUSTIN Directeur des Ressources en Eau / NELTAC Membre Ministère de l'Environnement, Pêche et Forêt	**VUNDU DIA MASSAMBA, VICTOR** Directeur Juridique Ministère de l'Environnement, Pêche et Forêts
LOKENYE, OMEDUNGA FRANCOIS Directeur – Conseiller Technique Société Nationale d'Electricité (SNEL)	**KAVESE, PALUKU** Directeur au Ministère de l'Energie République Démocratique du Congo
KENYA	
WANYONYI, ENOCK SABUNI Regional Manager Water Resources Authority - Lunch	**MOGUSU, DANIEL T.** Ministry of Water and Irrigation
WEKESA, GLADYS Ministry of Water and Irrigation	**MUSUVA, M. PETER** Ministry of Water Resources
RWANDA	
REMY, MUGUNGA Economic Advisor, Presidency's Office	**MUSHINZIMANA, JEAN-MARIE** National Water and Sanitation Policy Lead Ministry of Natural Resources
HABIYAREMYE, JEAN BAPTISTE Vice-Chair NBDF-Rwanda	**DR. HERMAN, MUSAHARA** National University of Rwanda
ASIIMWE, ANITA Director – HIV/AIDS Unit / TRACPlus	**MUSABYIMANA, INNOCENT** Acting Director of Planning, Policy and capacity Building
MUGENGANO, ISARO LISA Ministry of Natural Resources / MINIRENA	**RUGUMIRE, MAKUZA EMMANUEL** NPC – CBSI
NYIRAKAMANA, JACQUELINE NBI National Focal Officer / MINIRENA	**KANYAMIHIGO, CHARLES** Directeur Technique Electricité ELECTROGAZ
RUTAZIGWA, ALPHONSE Journalist – The Newtimes	**NYIRAMATAMA, ZAINA** Lecturer – National University of Rwanda Gender Specialist & Independent Consultant
TANZANIA	

SONYI, CHRISTINA Director of Policy, Planning & Information services Ministry of Justice & Constitutional Affairs	**HAMDUN, RASHID MANSUR** Principal Environmental Engineer Tanzania Electric Supply CO LTD
Eng. JUMA, F. MKOBYA Seniro Energy Engineer Ministry of Energy and Minerals	
UGANDA	
Eng. BOMUKAMA, SOTTIE Director - Directorate of Water Development Ministry of Water and Environment,	**BAKOBAKI, JACKLINE** Senior Personnel Officer Ministry of Water and Environment
IKWAPUT, NYEKO JOYCE Senior Fisheries Officer Department of Fisheries Resources	**SAJJABI, FREDRICK JOHN** Senior Energy Officer Ministry of Energy and Mineral Development
PULLE, DOREEN Engineer – Ministry of Water and Environment	
NELSAP-CU	
SENDAMA, ANTOINE Regional Coordinator	**OLET, EMMANUEL** Program Officer WR&E
MUNGYEREZA, HAM Finance and Admin. Manager	**KANYI, PETER MAINA** Senior Economist
NZAYANGA, DESIRE Program Officer - Power	**KAYIGAMBA, FRANCOISE** Environmental Advisor
MUGOREWICYEZA, EMERITA Social Development Officer	
RIVER BASIN PROJECTS	
MWINJAKA, R. OMARI Project Officer – Mara Project	**MOHAMMED, BADAZA** Project Manager – Sio Malaba Malakisi Project
EBONG, IVAN GEOFFREY Regional Project Coordinator - LEAF	**NABIDE, ISAH** Project Manager – Kagera

MBESHERUBUSA, DEO Project Manager Rusumo Falls Project	**KABENGA, INNOCENT** Assistant Project Manager – Kagera
MUHEBWA, LILLIAN Project Officer – Kagera	**BUGINGO, MARIE ANGE** Team Assistant Kagera Project
ENTRO	
WUBALEM, FEKADE Social Development Officer Eastern Nile Technical regional Officer (ENTRO)	
FACILITATORS	
CHIKOZHO, CLAUDIOUS Alterra Wageningen UR	**MANSFELD, MADELEINE VAN** Alterra Wageningen UR
ROEST, KOEN Alterra Wageningen UR, Centre for Water and Climate	**GROOT, ANNEMARIE** Alterra Wageningen UR, Centre for Water and Climate
RUKUNGA, GERALD Program Manager Environmental health, AMREF, Nairobi Kenya	**FROEBRICH, JOCHEN** Integrated Water Resources Management Centre for Water and Climate (CWK) Wageningen UR - Alterra

10 Annex V Kigali Workshop Agenda

Day 1 Program day 1: addressing social development in NELSAP projects

9.00 – 9.40	Introduction of participants and programme	All participants
9.40 - 9.55	Statement on Social development aspects and Climate change issues in the NELSAP region and projects	*Antoine Sendama NELSAP Regional Coordinator*
9.55-10.00	Statement on Social development aspects and Climate change issues in the NELSAP region and projects: NELTAC chair	*Idd Buhanga NELTAC chair*
9.20 - 9.35	Official opening of the Workshop	*Jean Marie Mushinzimana*, Ministry of natural resources/ NETAC member
10.15 - 10.30	Health Break	

10.30 - 10.50	Social development in international policies	Ms. Emerita Mugorewicyeza SDO Dr. Fekade Wubalem SDO
10.50 - 11.20	Relevance of social development to IWRM	Dr. Claudius Chikozo Wageningen UR Discussant Nabide Isah Kiti Project Manager, Kagera TIWRMD Project
11.20 – 11.40	Natural resources competition	Dr. Fekade Wubalem CBSI
11.40-12.10	HIV/Aids and Waterborne diseases in NELSAP context	Gerald Rukunga AMREF-Discussant Dr. Anita Asiimwe Ministry of Health Rwanda
12.10-12.40	Gender in NELSAP context	Ms. Emerita Mugorewicyeza Discussant Ms. Nyiramatama Zaina Ministry of Gender
12.40-13.10	No social development without genuine stakeholder participation in IWRM	Dr. Annemarie Groot Wageningen UR
13.00-14.30	Lunch Break	
14.30-18.00	Social development perspectives of key importance to NELSAP projects: Group discussion and Sharing results	Participative discussions by ALL
19.00-21.00	Cocktail	

Day 2 Program day 2: NELSAP Projects and developing action plans

09.00-09.10	Introduction to today's programme	NELSAP/Annemarie Groot *Wageningen UR*
09.10 - 11.00	Getting to know the NELSAP projects: Project Managers presentations	SMM, MARA, LEAF, Kagera, Rusumo, Interconnection Project Project Managers
11.00 - 11.15	Health Break	
11.15 - 13.00	Addressing social development aspects: Interactive assessment of NELSAP projects	Peer assessment by All
13.00 - 14.30	Lunch Break	
14.30 - 16.15	Action planning: addressing social development in the NELSAP projects	Facilitated discussions
16.15 - 16.30	Health Break	
16.30 - 17.30	Sharing results on the action planning	Plenary
17.30 - 18.00	Syntheses: Participants reflection on the day	All

Program day 3: Coping with climate change & variability in NELSAP projects: Action plans

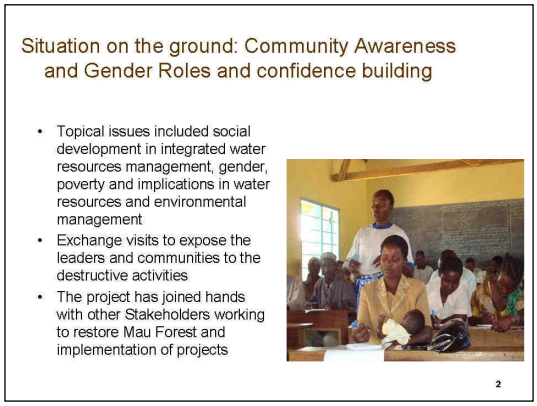
09.00-09.10	Introduction to day's programme	NELSAP/Madeleine van Mansfeld, Wageningen UR
09.10-09.50	Climate change and climate variability in the Nile Basin: Opportunities and risks	Koen Roest *Wageningen UR*
09.50-09.15	Examples of adaptation measures for coping with climate change	Emmanuel Olet, Program officer water resources development
10.15-10.30	Health Break	
10.30-11.00	Coping with climate change: Process principles	Madeleine van Mansfeld
11.00-11.30	Coping with climate change: Methodologies	Annemarie Groot
11.30-11.45	Environment challenges within the NELSAP region	By Kayigamba Francoise NELSAP Environmental Advisor
11.45-12.30	Opportunities and risks for coping with CC and CV within NELSAP projects: Discussions in project groups ➢ Identification of risks in the projects and looking for opportunities ➢ Defining three key strategies	Working Groups
12.30-14.00	Lunch Break	
14.00-15.30	Coping with climate change and variability in NELSAP projects: Translation of key strategies into action plans and their links to poverty reduction	Working Groups
15.30-16.30	Prepare presentations + health break	
16.30–17.00	Presentation of Groups and workshop results	Participants/NELSAP/ Facilitators
17.00	Closure of the workshop	

11 Annex VI Workshop exercise example

11.1 Mara Transboundary Integrated Water Resources Management and Development project

Mr. Omari Mwinjaka started his presentation by providing some background information on the Mara Transboundary Integrated Water Resources Management and Development project.

It was shown that the Mara River contributes to the flow into Lake Victoria and the Nile both being of great global and regional economic and environmental importance. The project objective is to establish a sustainable framework for the joint management of the water resources of Mara River Basin in order to prepare for sustainable development oriented investments that will improve the living conditions of the people while protecting the environment.



The project is organized into four inter-related components: 1) Establishment of a sustainable framework for joint management of the shared water resources of the Mara River Basin; 2) development of an investment strategy and conducting pre-feasibility studies; 3) building capacity at all levels for sustainable management and development of Mara River Basin and, 4) Implementing small-scale investment projects to build early confidence in Mara River Basin community. Mr. Omari Mwinjaka discussed some specific project activities concerning community awareness and gender roles and confidence building. One of the future challenges is to find sources for funding for the implementation of additional small scale investments projects for confidence building among the basin communities. Moreover, another future challenge is to ssupport poverty reduction efforts through strengthening existing market potentials in the basin especially ecotourism.

After reflection with the participants provide the top three social development issues selected by the project managers were:
1/ HIV AIDS, 2/ Education, 3/ Waterborne diseases

To develop an action plan for coping with climate change and climate variability the participants of the Mara group made a SWOT analysis of the project and formulated than their strategies and dreams

A. Strategies

1. Improving climatic forecasting and dissemination of information (Mechanisms)
2. Policy formulation / review to incorporate CC and CV aspects
3. Technological adaptation e.g. improved land use management and research development

B. Dreams

1. Reviewed policy on disaster management to include climate change and climate variability
2. Formulated and revised strategies on poverty reduction
3. Capacity Building and sensitization
4. Included in Planning and budgeting
5. Policy formulation
6. Awareness creation
7. Participate in re-forestation ex. of catchment
8. Provide info to decision making
9. National watershed programs
10. Incorporate CC and CV issues in government policies
11. Improve land use management and research
12. Initiated a tree planning project mobilising the community
13. When still working with MARA project, sensitised people against prevention of waterborne diseases
14. Advocated for institutional reforms regarding CC
15. Development of integrated information system to make use of spatial-temporal availability of rain by combined research, extension and capacity building to get a deep understanding/ at local and young population about value of natural lands (forest, savannah) and provide results and success stories from man protection.

11.2 Lakes Edward and Albert Fisheries Pilot Project (LEAF)

The Lakes Edward and Albert Fisheries Pilot Project (LEAF) project was introduced by Mr. Ivan Ebong.

Activities planned to project completion

Component	Planned activities
1. Integrated Lake Management Plan preparation	• Review and approve the final Integrated Lakes Management Plan and investment projects by the RPSC
2. Introduction of co-management	• Conduct study tours for the nascent co-management structures in DR Congo and Uganda
3. Implementation of community development activities	• Implementing all community development projects including substantial completion and defects liability by November 2008. • Certification and final payment to Community development projects by November 2008.
4. Project coordination and institutional development	• Conduct study tours for the government officials and ensure project concludes successfully

The overall project objective is to avail the Governments of Uganda and the DR Congo with a sustainable investment and management plan for the joint use of the water and fisheries resources of Lakes Edward and Albert. The project entails various components such as the Lakes Management Plan preparation, co-management, community development activities and project coordination & institutional development. Mr. Ivan Ebong also showed the progress made peer project component.

The activities planned to project completion and some the Post Pilot Project Activities were discussed. A Development Partners Conference will be convened to promote the financing of the Lakes Management Plan and investment projects (October 2008).

The NELSAP project managers have been subjected to a peer review of their colleagues (six times). Based on the discussions with the six groups of colleagues visiting them, they selected the most important social issues to be worked out further. Below are the top three social development issues selected by the project managers:

1. Project plan review
2. Stakeholder involvement (early tangible results)
3. HIV AIDS
4. Poverty

Action planning for CC and CV

Translate the three opportunities/strategies into smart action plans in order to better reduce the risk of CC and CV and increasing adaptive capacity and link it to poverty reduction.

- Define for each actions/what, who, where, when, how
- To address the issues of CC & CV in the implementation of the LEAF ILMP & IP
- To specifically integrate CC & CV into SD
- be S.M.A.R.T specific, Measurable, action oriented, realistic, time specific

Action 1: Sensitization/awareness raising on causes & effects/impacts of CC & CV to the various stakeholders

What:

➢Development and package information/awareness materials

➢Identify appropriate channels for dissemination

- Identify partners
- Conduct awareness (workshops, print, electronic, drama, etc)

Who: NBI/NELSAP, National governments, local governments, CSO, community leaders

Where: In the project catchment areas of Lakes Edward & Albert

When: October 2008-2015

How: Participative/collaborative approaches, Resource mobilization

Action 2: Putting in place appropriate policies, plans and legislation/laws

What:
- Identify the gaps related to CC & CV in the existing Policies, Plans and laws
- Draft appropriate policies, plans and laws
- Advocate and influence the final ratification through appropriate institutions of governments
- Implement the Policies, Plans and laws

Who: NBI/NELSAP, National governments, local governments, CSO, community leaders

Where: At national level

When: October 2008-2015

How: Partnership, Collaboration, Advocacy, Active participation, Resource mobilization

Action 3: Practical actions of tree planting, water resources management & soil conservation

What:
- Carry out catchment forestation
- Promote good agricultural practices
- Promote protection of lake shorelines, river banks & wetlands
- Promote water harvesting and storage

Who: MWLE, MAAIF, LG, NFA, Affected communities

Where: In the project catchment areas of Lakes Edward & Albert

When: October 2008-2015

How: Participative/collaborative approaches, Resource mobilization

12 Annex VII: Contributors to the report

This report is the result of discussions between all partners in the NeWater consortium. It has been edited by Alfred Hitchcock. The different chapters were written by the following persons:

Fons Jaspers, Alterra, Wageningen-UR, The Netherlands

Chapter 2: Greet Francois, WOPP, Katholieke Universiteit Leuven, Belgium

Chapter 3 and 4: Annemarie Groot and Madelaine van Mansfeld, and Koen Roest, all

Alterra, Wageningen-UR, The Netherlands